1/16

YEAST TOPOISOMERASE II E. COLI GYRASE B E. COLI GYRASE A	-unumumAmm -unumumAmAm		7777771 	
HUMAN SUCCINYL COA-TRANSE E. COLI ACETATE COA-TRANSE E. COLI ACETATE CO-A TRASNI	ERASE α		a	
B. SUBTILIS DNA POL III α E. COLI DNA POL III α E. COLI DNA POL III ε				
YEAST HISTIDINE BIOSYNTHE E. COLI HISTIDINE BIOSYNTHE E. COLI HISTIDINE BIOSYNTHE	ESIS HIS2	-CZ	-	}
HUMAN δ-1-PYRROLINE-5-CA E. COLI γ-GLUTAMYL PHOSPA E. COLI GLUTAMATE-5-KINAS	HATE REDUCTA	SYNTHETASE ← ISE I	777777	7//////// 7/////////

FIG. 1A

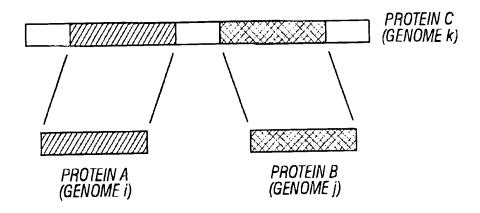


FIG. 1B

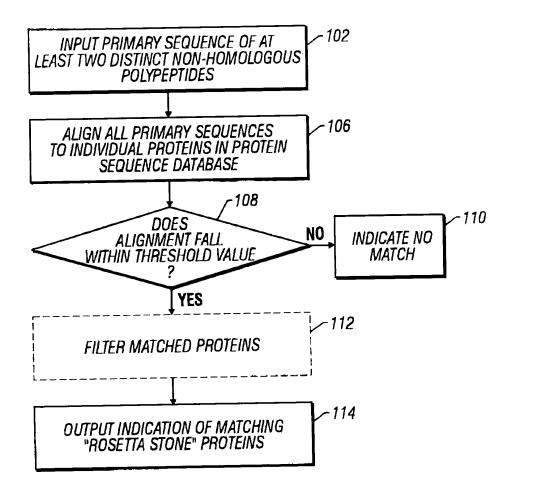


FIG. 2A

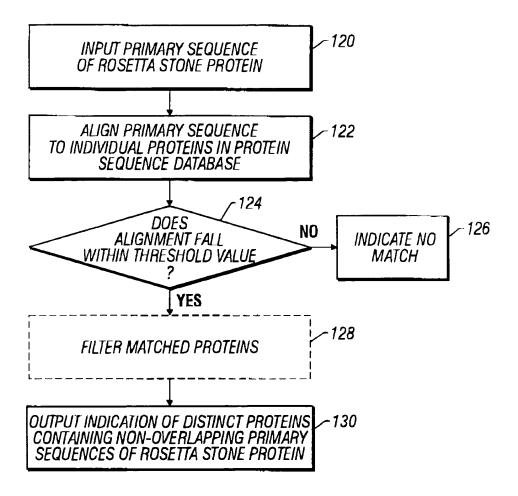
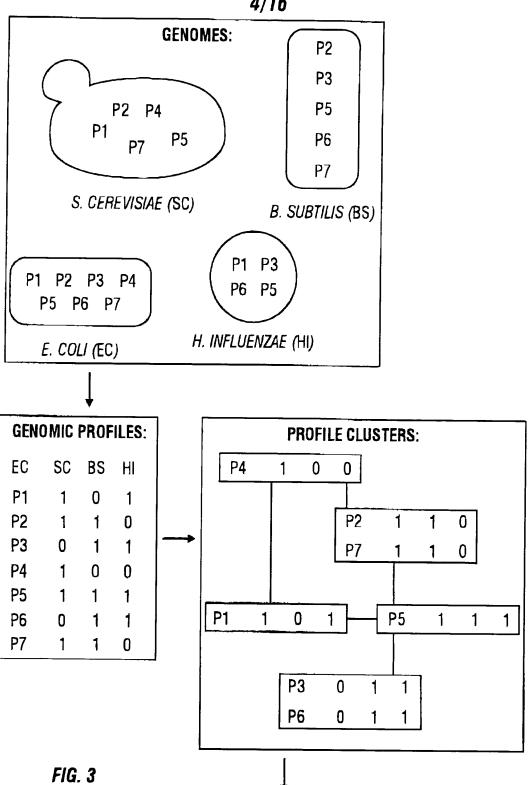


FIG. 2B



CONCLUSION: P2 AND P7 ARE FUNCTIONALLY LINKED, P3 AND P6 ARE FUNCTIONALLY LINKED

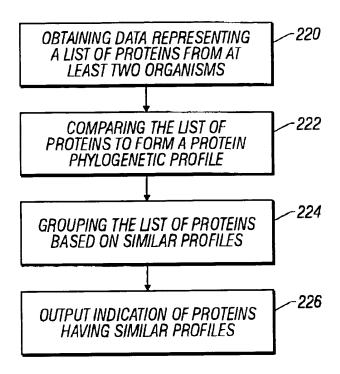


FIG. 4A

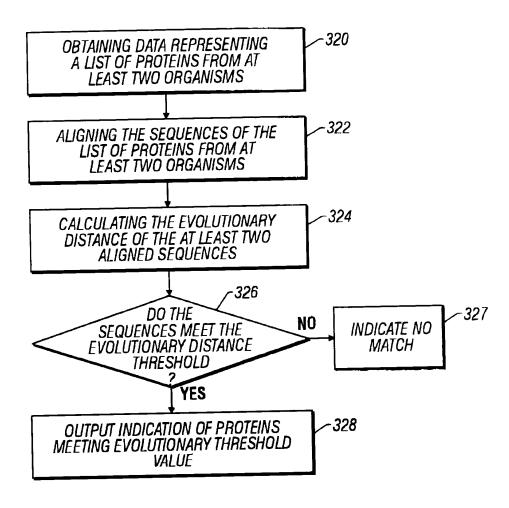


FIG. 4B

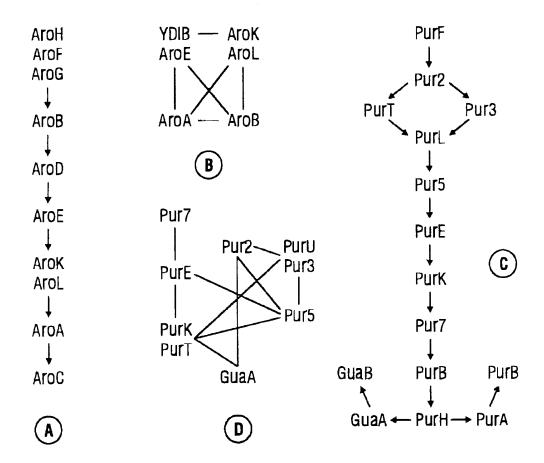


FIG. 5

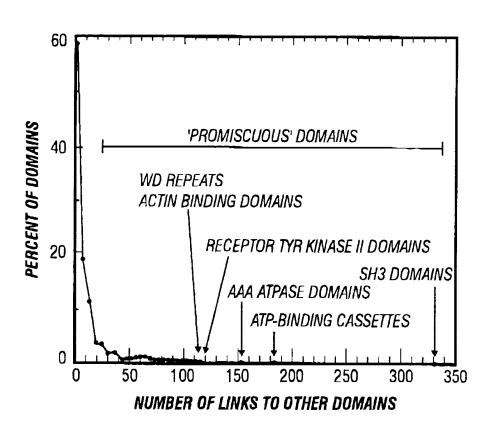


FIG. 7

INITIAL PROFILE

ONE BIT DIFFERENT

1877 Pgsa *PHOSPHOLIPID SYNTHESIS* 2895 YGGH *HYPOTHETICAL*

0648 YBEX *HYPOTHETICAL* 3624 RL34 *RIBOSOME L34*

3222 RL36 RIBOSOME L36
3115 RL27 RIBOSOME L27
3097 RS15 RIBOSOME S15
2731 YQCB HYPOTHETICAL
0058 YABO HYPOTHETICAL
1059 YCEC HYPOTHETICAL
0229 RFH PEPTIDE RELEASE FACTOR
2539 CIPB HEAT SHOCK PROTEIN

4071 YJFH HYPOTHETICAL

3230 RS14 *RIBOSOME S14*

1387 G3P3 DEHYDROGENASE

3242 RL4 *RIBOSOME L4* 1945 NONE *HYPOTHETICAL*

2561 Grpe CO-CHAPERONE

3661 GidB GLUCOSE INHIB. DIVISION

3232 RL24 *RIBOSOME L24*

3210 DEF POLYPEPTIDE DEFORMYLASE

1684 RL20 RIBOSOME L20

0188 MesJ CELL CYCLE PROTEIN

2553 RF19 *RIBOSOME L19*

3116 RL21 *RIBOSOME L21*

4094 RL9 RIBOSOME L9

2567 SmpB SMALL PROTEIN B

3885 RL7 *RIBOSOME L7* 3224 RL15 *RIBOSOME L15* 3217 RL17 *RIBOSOME L17* 1177 PTH *PEPTIDYL-tRNA HYDROLASE* 2518 RNC *RIBONUCLEASE III*

FIG. 8A

INITIAL PROFILE

ONE BIT DIFFERENT

3132 RP54 SIGMA FACTOR

1174 DHAR OPERON REGULATION
3345 RtcR TRANSCRIPTION REGULATOR
BINDS SIGMA FACTOR RP54
0205 MItD LYTIC MUREINE
TRANSGLYCOSYLASE

0624 Roda ROD SHAPED DET. 0089 FtsW CELL DIVISION 1163 AIr2 ALANINE RACEMASE 1070 YCEG HYPOTHETICAL

4060 AMIB *Nam-Ala AMIDASE* 3948 AIr1 *ALANINE RACEMASE* 2890 YGGW *HYPOTHETICAL*

1889 Flid FLAG. HOOK

1910 FIIM *MOTOR* 1046 FIgB *FLAG BASAL*

1915 Flir Flag Biosynth
1914 Fliq Flag Biosynth
1911 Flin Motor
1858 Mota Motility
1056 Flgl Flag Hook
1051 Flgg Flag Hook/Basal
1050 Flgf Flag Hook/Basal
1049 Flge Flag Hook/Basal
1047 Flgc Flag Basal Body
1055 Flgk Flag Hook

FIG. 8B

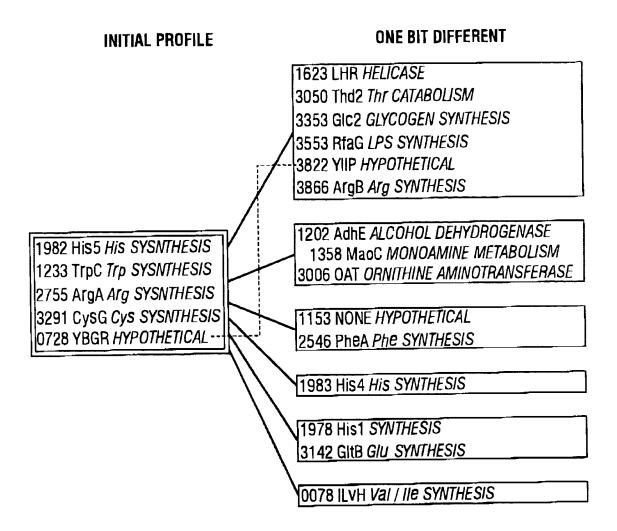


FIG. 8C

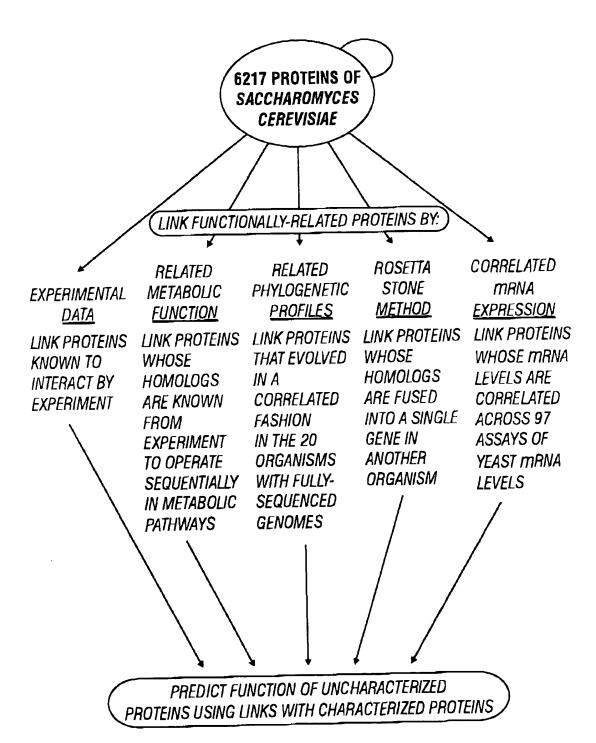
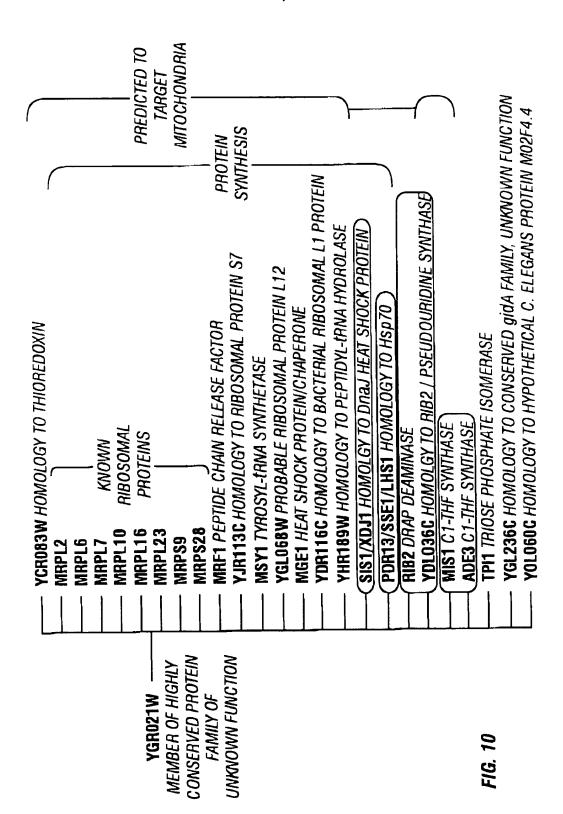


FIG. 9



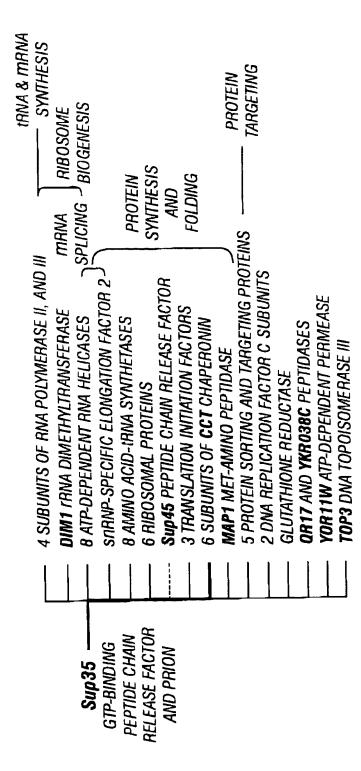


FIG. 11A

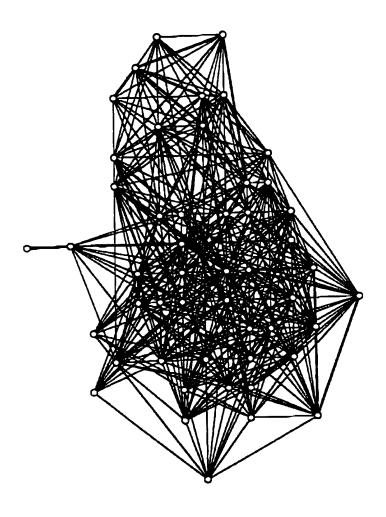


FIG. 11B

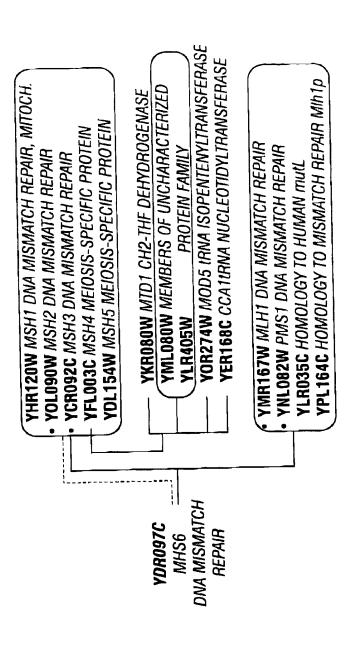


FIG. 12